Lawrence G. Malone
STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE
Three Empire State Plaza
Albany, NY 12223-1350

Charles C. Hunter
Catherine M. Hannan
Hunter Communications Law Group
ATTORNEYS FOR THE TELECOMMUNICATIONS RESELLERS ASSOCIATION
1620 I Street, NW; Suite 701
Washington, DC 20006

Lonn Beedy
METRO ONE TELECOMMUNICATIONS, INC.
8405 S.W. Nimbus Avenue
Beaverton, OR 97008-7159

Robert J. Aamoth
Steven A. Augustino
Melissa M. Smith
Kelley Drye & Warren LLP
COMPETITIVE TELECOMMUNICATIONS ASSOCIATION
1200 19th Street; Suite 500
Washington, DC 20036

Michael K. Kellogg
Rachel E. Selinfreund
Kellogg, Huber, Hansen, Todd & Evans, P.L.L.C.
ATTORNEYS FOR SBC COMMUNICATIONS, INC.
1301 K Street, NW; Suite 1000 West
Washington, DC 20005

Cynthia B. Miller
FLORIDA PUBLIC SERVICE COMMISSION
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Michelle W. Cohen
Paul, Hastings, Janofsky & Walker, LLP
ATTORNEYS FOR METRO ONE TELECOMMUNICATIONS, INC.
1299 Pennsylvania Avenue, NW; 10th Floor
Washington, DC 20004

Carol Ann Bischoff
COMPETITIVE TELECOMMUNICATIONS ASSOCIATION
1900 M Street, NW; Suite 800
Washington, DC 20036

Robert M. Lynch
Roger K. Toppins
Michael J. Zpevak
Kathleen E. Palter
SBC COMMUNICATIONS INC.
One Bell Plaza; Room 3703
Dallas, TX 72502

William T. Lake
William R. Richardson, Jr.
Samir Jain
David M. Sohn
Todd Zubler
Wilmer, Cutler & Pickering
ATTORNEYS FOR U S WEST, INC.
2445 M Street, NW
Washington, DC 20037

Robert B. McKenna
U S WEST, INC.
1020 19th Street, NW
Washington, DC 20036

Alan G. Fishel
Arent Fox Kintner Plotkin & Kahn
ATTORNEYS FOR CO SPACE SERVICES, INC.
1050 Connecticut Avenue, NW
Washington, DC 20036-5339

Mark C. Rosenblum
Roy E. Hoffinger
Elaine McHale
Stephen C. Garavito
Richard H. Rubin
AT&T CORP.
295 North Maple Avenue
Basking Ridge, NJ 07920

Lee Selwyn
Economics and Technology, Inc.
One Washington Mall
Boston, MA 02108-2617

James M. Tennant
LOW TECH DESIGNS, INC.
1204 Saville St.
Georgetown, SC 29440

Danny E. Adams
Rebekah J. Kinnett
Brian D. Hughes
Kelley Drye & Warren LLP
ATTORNEYS FOR CABLE & WIRELESS USA, INC.
1200 19th Street, NW; Suite 500
Washington, DC 20036

Joseph A. Kahl
Director of Regulatory Affairs
RCN TELECOM SERVICES, INC.
105 Carnegie Center
Princeton, NJ 08540

Douglas E. Hart
Frost & Jacobs, LLP
CINCINNATI BELL TELEPHONE COMPANY
2500 PNC Center
201 East Fifth Street
Cincinnati, OH 45202

David W. Carpenter
Mark E. Haddad
Peter D. Keisler
Michael J. Hunseder
Scott M. Bohannon
Rudolph M. Kammerer
Sidley & Austin
ATTORNEYS FOR AT&T CORP.
1722 I Street, NW
Washington, DC 20006

Susan M. Eid
Tina S. Pyle
Richard A. Karre
MEDIAONE GROUP, INC.
1919 Pennsylvania Avenue, NW; Suite 610
Washington, DC 20006

James S. Blaszak
Colleen Boothby
Andrew Brown
Levine, Blaszak, Block & Boothby, LLP
ATTORNEYS FOR THE AD HOC TELECOMMUNICATIONS USERS COMMITTEE
2001 L Street, NW; Suite 900
Washington, DC 20036

Glenn B. Manishin
Blumenfield & Cohen – Technology Law Group
ATTORNEY FOR LOW TECH DESIGNS, INC.
1615 M Street, NW; Suite 700
Washington, DC 20036

Rachel J. Rothstein
Brent M. Olson
CABLE & WIRELESS USA, INC.
8219 Leesburg Pike
Vienna, VA 22182

John T. Lenahan
Christopher M. Heimann
Gary L. Phillips
Larry A. Peck
Michael S. Pabian
ATTORNEYS FOR AMERITECH
1401 H Street, NW; Suite 1020
Washington, DC 20005

Jonathan Askin
THE ASSOCIATION FOR LOCAL TELECOMMUNICATIONS SERVICES
888 17TH Street, NW; Suite 900
Washington, DC 20006

Robert Berger
Russell Merbeth
Barry Ohlson
WINSTAR COMMUNICATIONS, INC.
1146 19th Street, NW; Suite 200
Washington, DC 20036

William P. Hunt, III
LEVEL 3 COMMUNICATIONS, INC.
1450 Infinite Drive
Louisville, CO 80027

Ruth Milkman
The Lawler Group, LLC
ATTORNEY FOR ALLEGIANCE TELECOM, INC.
1909 K Street, NW; Suite 820
Washington, DC 20006

Thomas M. Koutsky
James D. Earl
COVAD COMMUNICATIONS COMPANY
700 13th Street, NW; Suite 950
Washington, DC 20005

David V. Dimlich
SUPRA TELECOM
2620 SW 27th Avenue
Miami, FL 33133

Andrew D. Lipman
James N. Moskowitz
Swidler Berlin Shereff Friedman, LLP
ATTORNEYS FOR RCN TELECOM SERVICES, INC.
3000 K Street, NW; Suite 300
Washington, DC 20007

Jeffrey L. Sheldon
UTC
1140 Connecticut Avenue, NW; Suite 1140
Washington, DC 20036

Jonathan E. Canis
John J. Hietmann
Kelley Drye & Warren LLP
ATTORNEYS FOR THE ASSOCIATION FOR LOCAL TELECOMMUNICATIONS SERVICES
1200 19th Street, NW; Fifth Floor
Washington, DC 20036

Russell M. Blau
William L. Fishman
Swidler Berlin Shereff Friedman, LLP
ATTORNEYS FOR WINSTAR COMMUNICATIONS, INC.
3000 K Street, NW; Suite 300
Washington, DC 20007

Russell M. Blau
Tamar E. Finn
Swidler Berlin Shereff Friedman, LLP
ATTORNEYS FOR LEVEL 3 COMMUNICATIONS, INC.
3000 K Street, NW; Suite 300
Washington, DC 20007

David R. Conn
MCLEODUSA TELECOMMUNICATIONS SERVICES, INC.
McLeodUSA Technology Park
6400 C Street SW
Cedar Rapids, IA 52406-3177

Jonathan E. Canis
Michael B. Hazzard
Kelley Drye & Warren LLP
ATTORNEYS FOR METROMEDIA FIBER NETWORK SERVICES, INC.
1200 Nineteenth Street, NW
Washington, DC 20036

Daniel M. Waggoner
Robert S. Tanner
Davis Wright Tremaine LLP
ATTORNEYS FOR NEXTLINK COMMUNICATIONS, INC.
1155 Connecticut Avenue, NW; Suite 700
Washington, DC 20036

Jonathan E. Canis
Edward A. Yorkgitis, Jr.
Michael B. Hazzard
Kelley Drye & Warren LLP
ATTORNEYS FOR E.SPIRE COMMUNICATIONS, INC AND INTERMEDIA COMMUNICATIONS, INC.
1200 Nineteenth Street, NW; Fifth Floor
Washington, DC 20036

William P. Barr
M. Edward Whelan
GTE SERVICE CORPORATION
1850 M Street, NW; Suite 1200
Washington, DC 20026

Ward W. Wueste, Jr.
Thomas R. Parker
GTE SERVICE CORPORATION
1255 Corporate Drive
Irving, TX 75038

James G. Pachulski
BELL ATLANTIC NETWORK SERVICES, INC.
1320 N. Courthouse Road; 8th Floor
Arlington, VA 22201

Randall B. Lowe
Julie A. Kaminski
Renee Roland Crittendon
J. Todd Metcalf
Piper & Marbury, L.L.P.
ATTORNEYS FOR PRISM COMMUNICATION SERVICES, INC.
1200 Nineteenth Street, NW; Suite 700
Washington, DC 20036

Marilyn Showalter
Richard Hemstad
William R. Gillis
WASHINGTON UTILITES AND TRANSPORTATION COMMISSION
1300 South Evergreen Park Drive, SW
Olympia, WA 98504

Charles D. Gray
James Bradford Ramsay
NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS
1100 Pennsylvania Avenue, Suite 603
Post Office Box 684
Washington, DC 20044-0684

R. Gerard Salemme
Daniel Gonzalez
NEXTLINK COMMUNICATIONS, INC.
1730 Rhode Island Avenue, NW; Suite 1000
Washington, DC 20036

Russell M. Blau
Patrick J. Donovan
Swidler Berlin Shereff Friedman LLP
ATTORNEYS FOR CHOICE ONE COMMUNICATIONS, NETWORK PLUS, INC., GST TELECOM, INC. AND CTSI, INC.
3000 K Street, NW; Suite 300
Washington, DC 20007

Steven G. Bradbury
Paul T. Cappuccio
Patrick F. Philbin
John P. Frantz
Kirkland & Ellis
655 Fifteenth Street, NW
Washington, DC 20005

Donald W. Downes
Glenn Arthur
Jack R. Goldberg
John W. Betkoski, III
Linda Kelly Arnold
CONNECTICUT DEPARTMENT OF PUBLIC UTILITY CONTROL
Ten Franklin Square
New Britain, CT 06051

Jeffrey S. Linder
Suzanne Yelen
Wiley, Rein & Fielding
1717 K Street, NW
Washington, DC 20006

Nelle Williams

ATTACHMENT A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:	)	
	)	
Implementation of the Local Competition	)	CC Docket No. 96-98
Provisions in the Telecommunications Act	)	
of 1996	)	
	)	

DECLARATION OF JAMSHED K. MADAN AND MICHAEL D. DIRMEIER
On Behalf of BellSouth Corporation

Jamshed K. Madan and Michael D. Dirmeier to hereby affirm and state as follows:

1. Our names are Jamshed K. Madan and Michael D. Dirmeier. We are both principals in the firm of Georgetown Consulting Group, Inc., 456 Main Street, Ridgefield, CT 06877. Over the last two years, Georgetown Consulting Group (GCG) has been retained to appear on behalf of BellSouth Telecommunications, Inc. to present testimony in each of the nine states in which BellSouth operates related to Unbundled Network Elements (UNEs) and issues concerning the appropriate Universal Service Fund (USF) at the state level. In the cases regarding UNEs, GCG rebutted the contention of AT&T and MCI that their application of the HAI model resulted in reasonable UNE prices, showing that the inputs selected by AT&T and MCI fail to reflect local conditions of the territory of BellSouth and fail to be reasonable and forward-looking. In those cases regarding the Universal Service support, GCG also rebutted the contention of AT&T and MCI that their application of the HAI model is reasonable. We evaluated the reasonableness of the AT&T and MCI application of the HAI model by focusing on the nature and quality of the inputs selected. We did not evaluate the logic and structure of the HAI model, except as necessary to determine the use made by the model of the user adjustable inputs.

2. The Commission's Notice in this proceeding invited comment on incumbent LEC economies of "density, connectivity and scale," Notice at ¶ 26. Various parties to this proceeding have suggested that incumbent LECs benefit from tremendous economies

of scale that CLECs could not duplicate. See, *e.g.*, AT&T Comments at 19. The Commission previously relied to some extent on "economies of density, connectivity, and scale" as supporting various unbundling requirements. First Report and Order at ¶ 11.

3. In summary, the HAI Model reveals that CLECs can match or exceed ILEC economies over the areas that CLECs typically are serving. The HAI model does not support general unbundling of ILEC networks on any premise that the economies of ILEC networks cannot be matched by the economies of CLEC facilities.

4. The purpose of our declaration is to present evidence, using the HAI model, to describe the economies of scale density and connectivity for loop, transport, signaling and switching UNEs. We will also provide rebuttal comments to the declaration of Mark T. Bryant, Ph.D. which was presented on behalf of MCI WorldCom, Inc. Finally, we believe that the analysis provided is relevant to comments requested by the FCC in their Second Further Notice of Proposed Rulemaking, in these dockets that was released on April 16, 1999.

HAI MODEL RESULTS FOR SERVING PART OF A GEOGRAPHIC SERVICE AREA

5. We have obtained and present here various loop and switching information for all of the Unbundled Network Elements that are provided by the HAI Model for the following scenarios:

    a. for the Georgia operations of BST;
    b. for the Atlanta Metropolitan operations of BST;
    c. for the northern portion of the Atlanta Metropolitan area;
    d. for the central portion of the Atlanta Metropolitan area; and
    e. for the southern portion of the Atlanta Metropolitan operations.

6. The primary purpose of our analysis was to obtain loop, transport, signaling and switching data from the HAI Model that would compare certain segments of the region with the operations for the Atlanta Metro area and BellSouth operations in the state of Georgia as a whole. The Atlanta Metro area represents approximately 58% of the total lines in the state of Georgia. Each of the three regions that we have modeled, northern, central, and southern regions, represent approximately 20% of the total lines in the state of Georgia. This analysis provides a substantial range over which relevant costs could be determined from the HAI model. For ease of reference, the following table will show the major statistics of the various regions and the CLEC subregions that we have modeled:

	Area	Total Lines	Bus Lines	Total Lines per Sq. Mile	Business Lines per Sq. Mile	Number of CLLIs
BST-Ga	21,351	4,343,728	1,244,635	203	58	178
Atlanta	3,040	2,566,713	800,172	844	263	53
North	787	894,106	303,636	1,136	386	13
Central	226	877,299	371,142	3,878	1,641	11
South	1,444	916,785	274,155	635	190	26

7. The subregions that we have modeled are reasonable surrogates for service areas that a Competitive Local Exchange Carrier (CLEC) would choose. It is likely that competitors initially will serve those areas that have a high density of customers where the greatest economies and efficiencies can be achieved. It is also likely that competitors initially will target business customers where, in most cases, the current price for business services is substantially above cost, thereby increasing competitors' ability to penetrate the market through appropriate price mechanisms and discounts.

8. In undertaking our analysis, we have used the default inputs provided by the HAI model, rather than territory specific inputs that GCG has testified to in various proceedings and believes is appropriate. This in no way suggests that we accept the validity of the default inputs. Rather, since the analysis focuses on the relative values between larger and smaller regions within the BellSouth operations in Georgia, the relative difference between the various scenarios using a consistent set of inputs provides data that is relevant to this proceeding.

9. For each of the scenarios that we present, we created new CLEC entities, each of which would serve only the lines in one of the four CLEC subregions that we created - Atlanta Metropolitan; northern portion of Atlanta Metropolitan; central portion of Atlanta Metropolitan; and the southern portion of Atlanta Metropolitan. These CLEC entities represent efficient CLEC competitors, to which we refer throughout. This meant adjusting the customer and line data to eliminate all the customers and lines not

served by the wire centers under consideration. We adjusted the minutes of use, messages and local call attempts to be consistent with the number of lines in the CLEC subregions that were being modeled. We also adjusted the number of tandem switches and related signaling equipment (STP pairs and SCPs), that would be consistent with the reduced number of lines in each one of the CLEC subregions.

Finally, we made an appropriate adjustment to set the per line network operations expense and network administration expenses, which are included in the model as a fixed expense on a per line basis, at a cost level equal to the overall BellSouth-Georgia per line rate. The HAI Model computes this fixed level of expense as the ARMIS expense for BST-Georgia divided by the number of lines in the study area. Since the study areas that we have fashioned each have only approximately 20% of the lines of BST-Georgia, the resulting fixed per-line expense would be approximately 5 times the level as for BST-Georgia without the adjustment that we have made. As a result, the forward-looking network operations and adminstration expense for the CLEC subregions is the same on a per-line basis as for the HAI Model's application for all of BellSouth-Georgia.

10. A summary of our results is shown on Attachment 1. In this summary, the details and costs of the various network elements are provided in a side-by-side comparison. The results of the analysis show the following:

  a. For the total network elements (i.e., loop and switching elements combined), each of the four CLEC subregions (north, central, south and Atlanta Metro) has costs that are lower ($11.68 to $14.85 for total loop and switching costs) than the total network element cost for BellSouth-Georgia ($17.74 total cost for loop and switching elements).

  b. For each one of the CLEC four subregions (north, central, south and Atlanta Metro) the aggregate cost for the switching elements is lower ($3.74 to $4.08) than the aggregate switching cost for BellSouth-Georgia ($4.10).

  c. For the four CLEC subregions (north, central, south and Atlanta Metro) the total loop cost ($7.60 through $10.95) is lower than the total loop cost for BellSouth-Georgia ($13.64).

This analysis shows that the forward-looking costs of serving customers in a subregion where a CLEC is likely to enter are actually lower than the overall costs faced by the ILEC for the entire region on a forward-looking basis. This analysis shows that the ILEC enjoys no cost advantage over a potential CLEC that undertook to serve specific subregions of the ILEC's territory. In this analysis, a CLEC that undertook to serve subregions that range from approximately 20% of the total lines in the state of Georgia (northern, central and southern Atlanta Metropolitan areas) to serving the total Atlanta Metropolitan area with approximately 58% of the total lines in the state, would have a cost advantage over the total operations of the ILEC. The significance of this analysis is that it shows a competitive advantage not only with regard to switching and transport, but also when a CLEC serves an area that contains only 20% of the ILEC's customers for the loop. This analysis indicates that the loop should not automatically be considered a UNE that must be offered in all cases, since clearly in the most likely scenario of CLECs providing service in highly targeted areas, the CLEC would have a lower potential forward-looking cost than would the ILEC. To the extent that the loop is provided as a UNE, for whatever reason, we believe that the data suggests strongly that a sunset provision also be set so that the CLECs will understand the period of time over which they need to deploy their own outside plant. The analysis shows that the CLECs will not have a cost disadvantage when they deploy their systems over a reasonable period of time.

11. Attachment 2 provides a refinement of the data referred to in the previous point. Specifically, the HAI Model provides loop UNE costs for each of 9 density zones, from the least dense zone of 0 to 5 lines per square mile up to the highest density zone having in excess of 10,000 lines per square mile. In Attachment 2, we summarize the loop costs for the various CLEC subregions (north, central, south and Atlanta Metro) and for BST-Georgia in three composite density zones (lowest three, middle three, highest three). For each of the CLEC subregions, Attachment 2 reveals that costs are generally in the same range or lower than the costs for the overall operations in Georgia. Specifically:

    a. For the three lowest density zones, the monthly loop cost for the CLEC subregions is $21.38 to $25.76, compared to a monthly loop cost of $30.38 for the overall operations in Georgia in these same density zones.

    b. For the middle three density zones, the cost per loop for the CLEC subregion ranges from $10.44 to $11.55, compared with a loop cost of $11.64 for statewide operations in these zones.

    c. For the highest three density zones, the loop cost for the four CLEC subregions ranges from $6.13 to $7.55 per loop, compared with an overall loop cost of $6.90 for statewide operations in these zones.

This analysis also supports the conclusion that the costs faced by a new entrant CLEC would be comparable to or lower than the cost faced by an incumbent LEC for similar density zone operations. There is nothing to suggest that an ILEC would enjoy significant economies of scale by virtue of having statewide operations as compared with the operations of a CLEC that would serve only a fraction of the existing lines. In fact, the analysis, provided by the operation of the HAI model, would suggest that given the probable course of action of a CLEC first penetrating those areas that have high line densities, and further concentrating on business rather than residential customers, a CLEC would enjoy a significant cost advantage over the incumbent LEC which, in reality, faces not the efficient forward-looking investments as modeled by HAI, but in many cases its embedded network which could be even higher in cost than new efficient forward-looking technology that was available to its competitors.

12. For each of the four CLEC subregions, we have provided a separate attachment with relevant data. Attachment 3 presents the data for the northern CLEC subregion. This attachment, and each of the following attachments for the various CLEC subregions, consist of five pages as follows:

    a. Page 1 is a map of the various wirecenters that comprise the subregion.

    b. Page 2 lists the particular wirecenters that were chosen for the subregion from the universe of all of the wirecenters in the statewide operation.

    c. Pages 3 and 4 provide the output from the HAI model.

    d. Page 5 provides the scenario inputs with the modifications that we made to appropriately scale the operations for the subregion.

Attachment 4 provides the information for the central CLEC subregion.

Attachment 5 provides the information for the southern CLEC subregion.

Attachment 6 provides the information for the Atlanta CLEC subregion.

COMMENTS ON THE DECLARATION OF MARK. T. BRYANT, Ph.D. ON BEHALF OF MCI WORLDCOM, INC.

13. On paragraph 5, page 3 of his declaration, Dr. Bryant states that the Telecommunications Act's (the Act's) requirement that competitors be provided access to unbundled network components sensibly recognizes that new entrants may not be able to deploy facilities to provide all network elements at once, and that the provision of certain network elements may be subject to constraints on the minimum effective scale at which delivery of each network element is profitable.

    While there certainly may be circumstances under which new entrants would not be able to deploy facilities to provide all network elements at once, there has been no showing that gradual deployment of all elements over some reasonable period of time is necessary. This would appear to be a strategy of a CLEC hedging its bets until it determines that it can survive competition, rather than making the investment to compete, especially if it has a forward-looking cost advantage. This forward-looking cost advantage is supported by our analysis, which indicates that the aggregate cost for switching and transport, as well as for loop costs, for CLECs serving 20% to 58% of

all of the lines in a region is comparable to or lower than the cost facing an ILEC for all lines in the region. By bringing in the element of profitability as a reason to access UNEs, Dr. Bryant muddies the concepts even further. There is much more to profitability than the price of a UNE available from an ILEC. The total concept of profitability would include the price to be charged for the service (whether it is residential or business likely would have a profound impact on profitability), the price for other elements required to provide the service and the ability of the CLEC to obtain and retain customers in a competitive world by providing quality service.
Consistent with the notion that new entrants may not be able to deploy facilities to provide all network elements at once and, therefore, must have access to an ILEC's UNEs, should be the companion notion that after a reasonable period of time during which CLECs have been able to access ILEC UNEs, a sunset provision should be adopted, after which the ILECs would no longer be required to provide UNEs to CLECs. The duration of time in which ILECs should be required to make UNEs available to CLECs should be determined on the basis of reasonable construction times during which the CLECs should be able to deploy network elements of their own.

14. On paragraph 6, page 3, Dr. Bryant states that if any portion of the local network is subject to natural monopoly market conditions, it is the local loop.

While the local loop may be a natural monopoly in some markets, it is not a monopoly in all markets. The existence of cable television competitors, with the intense aggregation occurring in that industry, and AT&T's merger with TCI and planned acquisition of MediaOne, suggests that cable television facilities, as a substitute for the local loop is a near term reality. As mentioned in the BellSouth comments, there are other economic substitutes, including wireless for the local loop of the ILECs. Also, CAPS provide significant local loop competition for what historically has been the most profitable business segment for the ILECs-business customers in highly concentrated areas (as referenced in paragraph 14, page 7, of Dr. Bryant's affidavit).

15. On paragraph 6, page 3, Dr. Bryant states that loop structures constitute a very large fixed cost because, in order to serve a particular neighborhood, poles must be placed or trenches must be dug regardless of the number of subscribers in that neighborhood.

This declaration by Dr. Bryant directly contradicts some of the key assumptions in the HAI model which MCI has sponsored and to which its expert witnesses have testified in almost every jurisdiction. In numerous state jurisdictions, AT&T and MCI have sponsored witnesses who have testified that the large fixed cost to serve a particular neighborhood, as modeled by HAI, should take into account a substantial amount of structure sharing for these facilities. In some cases it is suggested that these structures could be shared with as many as three additional utilities, thereby reducing these fixed charges by almost 75%. In addition, to the extent that it is the theory that these fixed structures already exist, then a CLEC would not be faced with huge amounts of initial capital investment, but rather would be able to lease these facilities from their current owners. In presenting his graphs and empirical data, it is difficult to tell whether Dr. Bryant has assumed that ILEC outside plant facilities would be shared while, for the CLEC, facilities would be required "regardless of the number of customers" as suggested in his paragraph 6.

16. On paragraph 8, page 4, Dr. Bryant says that cables frequently must be placed in advance of demand. Further down in paragraph 8, on page 5, he goes on to state that the new entrant must also consider growth that will occur due to its own marketing efforts as it attracts subscribers from the incumbent.

    Here once again, are statements from Dr. Bryant that are in direct contradiction to statements made by other AT&T and MCI witnesses in numerous state regulatory proceedings. In each of the state regulatory proceedings involving the HAI model, AT&T and MCI witnesses have argued that the fill factor for cables and other equipment that should be considered appropriate is a fill factor that is specifically not intended to provide for future demand. In this case, where the exercise is to consider the conditions under which a CLEC would undertake investment in loop plant, the position is completely reversed, and a new witness indicates that it is appropriate to consider that equipment would have to be placed in advance of demand. Again, in presenting his charts and data it is difficult to determine whether Dr. Bryant has required additional investment on behalf of the CLEC and limited investment on behalf of the ILEC (as limited by the assumptions in the HAI model).

17. On paragraph 9, page 5, Dr. Bryant states that it will be difficult, if not impossible for new entrants profitably to overbuild the existing telephone network, since the new entrant initially would have very few customers from which the same fixed costs may be recovered.

    The scenario painted by Dr. Bryant may not be as simple as he is attempting to portray. The likely scenario is that CLECs, as CAPs have done before them, will attempt to secure customers that are clustered in high density areas as well as business customers who either have very large individual volume or are also clustered in high density areas. Access to an ILEC's network at UNE prices that are based on reasonable input assumptions provides CLECs with a no risk strategy and may discourage CLEC investment in facilities, rather than encourage such investment.

18. In paragraph 13, page 7, Dr. Bryant states that transport facilities operated by CAPS do not constitute a network in the sense of connecting multiple points to and among each other, but are point to point connections carrying a substantial amount of traffic from one point over a specific route to another point.

In its original comments, BellSouth addressed this concern by stating it would be reasonable to require the ILECs to provide transport UNEs on a case-by-case basis, where CLECs demonstrate that service cannot be provided without ILEC-provided transport. We would also point out that there is no requirement for a CLEC to provide service to every area or to every customer and, therefore, they can design and build their networks on a clean slate. The opportunity to provide limited service is not an opportunity available to the ILECs. Here, again, it would be possible for the CLEC to choose those areas in which it could profitably provide service if it had the ability to attract enough customers.

Moreover, the HAI results show that transport costs for efficient CLECs serving subregions of the total service territory generally are less, and frequently are significantly less, than the total transport costs experienced by an ILEC serving the entire service territory. See, *e.g.*, the second page of Attachment 1. Furthermore, since transport consists of a network covering a limited number of specific locations, the time required to construct a CLEC transport network should be significantly less than the time required to build out a feeder and distribution network covering all customers in an area.

19. In paragraph 16, page 8, Dr. Bryant states that within a local exchange area, the ILECs have switches located in each wire center. He goes on to state in paragraph 23, page 11, that in addition to the cost of the switch itself, several items that support the switch also have costs that do not vary with volume (buildings, power, air conditioning, test equipment).

It is not clear that the ILECs have a built in competitive advantage with regard to switches. The HAI Model suggests that they do not. If there were no telephone facilities in existence today, the number and location of telephone wire centers for a newly designed system would probably be fewer and different from those that currently exist. The CLECs have the opportunity to reflect those economies in the incremental networks that they could construct, whereas these opportunities are unavailable to the ILECs.

20. The scenarios that Dr. Bryant has chosen to portray in his declaration, are generally the worst case scenarios for a CLEC. The scenarios assume that a CLEC would be required to make substantial capital investments in advance of obtaining customers and thereby be unable to compete with an ILEC. By painting this worst case scenario, Dr. Bryant suggests that critical UNEs should be available to CLECs on an indefinite basis.

The more probable and likely scenario is the one that we recommend be considered by the Commission. This is a scenario in which the ILEC has in reality made substantial investments to provide an excellent level of service to its customers. The ILECs are now faced with the prospect of setting interconnection rates based upon the efficient, forward-looking costs of a hypothetical system. These hypothetical costs, in many cases, are lower than the embedded costs that actually have been incurred by the ILECs. Were this to be permitted indefinitely, a CLEC would have the advantage of continuously having a price for interconnection based upon a hypothetical efficient system without having to make any investment or take any financial risk - even in a situation where its forward-looking cost would be less than the ILEC's.

The ILEC's customers are grouped in various density zones. Those customers in the highest density zone afford a lucrative target for a CLEC. The ILECs' business customers with rates that currently, in many cases, subsidize residential rates, are also a lucrative target unless a massive rate restructuring is to take place prior to full competition. Therefore, there are substantial and ready markets available to the CLECs. The analysis that we have provided indicates that on a forward-looking basis using AT&T's model, a CLEC could effectively compete by providing its own investment in facilities in that its long-term forward-looking costs might actually be less than those of the incumbent utility. While in certain cases there could be an argument that it would not be possible for a CLEC to make the investment in facilities all at once, some transition period of time in which the UNEs are offered by the ILEC would be appropriate. In fairness, the concurrent setting of a sunset provision such that the playing field would be leveled in some reasonable period of time should also be adopted.

COMMENTS ON SECOND FURTHER NOTICE OF PROPOSED RULEMAKING

21. In paragraph 11, the Commission seeks comments on an approach that would allow sunset or modification of the unbundling obligations as technology and market conditions evolve over time.

    The data that we have provided in this proceeding shows that for the loop, transport, signaling and switching UNE elements, the forward-looking, efficient cost for various subsets of a particular region is equal to or less than the comparable cost of the ILECs. Given that the comparative cost for a CLEC subregion is a surrogate for a competitors' cost, and the CLEC subregion costs are below the ILEC regional total costs, economies of scale do not support competitors' claims that ILEC networks must be unbundled; the only requirement for unbundling should be that CLECs require time in which to deploy facilities with which to compete. This is a strong argument that for all of these UNE elements, a sunset provision should be adopted. The period of time should be reasonable to provide relief, if appropriate at all, for the competitors' arguments that not all network elements could be self-provided all at once.

22. In paragraph 12, the Commission asks parties to comment on the types of evidentiary standards or approaches that should govern application of section 251(d)(2) standards in determining which network elements must be unbundled.

Attachment 1

Atlanta - Metro Area Competitors

Overall Loop-Cost Comparisons

Loop elements		North-5		Central-2		South-2		Atlanta-2		GA-BST
NID										
Annual Cost	$	4,544,856	$	4,035,735	$	4,712,182	$	13,299,372	$	22,615,788
Unit Cost/month		0.42		0.38		0.43		0.43		0.43
Loop Distribution (DLC)										
Annual Cost	$	50,714,399	$	24,931,655	$	55,763,487	$	150,475,408	$	350,081,770
Unit Cost/month		5.99		4.12		8.01		6.78		9.32
		0		0		0		0		
Loop Distribution (non-DLC)										
Annual Cost	$	8,965,802	$	11,538,362	$	15,143,277	$	32,667,664	$	62,684,477
Unit Cost/month		3.96		2.58		3.75		3.80		4.30
Loop Distribution (all)										
Annual Cost	$	59,680,201	$	36,470,017	$	70,906,764	$	183,143,073	$	412,766,247
Unit Cost/month		5.56		3.46		6.45		5.95		7.92
Loop Concentration (DLC)										
Annual Cost	$	33,283,789	$	24,624,638	$	28,427,744	$	88,896,849	$	157,887,285
Unit Cost/month		3.93		4.07		4.08		4.00		4.21
Loop Concentration (non-DLC)										
Annual Cost	$	219,014	$	407,420	$	375,908	$	817,382	$	1,377,418
Unit Cost/month		0.10		0.09		0.09		0.10		0.09
Loop Concentration (all)										
Annual Cost	$	33,502,803	$	25,032,058	$	28,803,652	$	89,714,232	$	159,264,704
Unit Cost/month		3.12		2.38		2.62		2.91		3.06
Loop Feeder (DLC)										
Annual Cost	$	9,440,984	$	6,932,702	$	9,123,246	$	26,308,805	$	92,358,913
Unit Cost/month		1.11		1.14		1.31		1.18		2.46
Loop Feeder (non-DLC)										
Annual Cost	$	3,677,295	$	7,505,635	$	6,925,431	$	14,482,838	$	24,145,887
Unit Cost/month		1.63		1.88		1.71		1.68		1.66
Loop Feeder (all)										
Annual Cost	$	13,118,279	$	14,438,338	$	16,048,678	$	40,791,643	$	116,504,800
Unit Cost/month		1.22		1.37		1.46		1.32		2.24
Total Loop (DLC)										
Annual Cost	$	97,062,285	$	58,949,780	$	96,512,995	$	275,578,806	$	617,094,553
Unit Cost/month		11.46		9.73		13.86		12.41		16.44
Total Loop (non-DLC)										
Annual Cost	$	13,783,854	$	21,026,368	$	23,958,281	$	51,369,513	$	94,056,985
Unit Cost/month		6.09		4.70		5.93		5.98		6.45
Total Loop (all)										
Annual Cost	$	110,846,139	$	79,976,148	$	120,471,275	$	326,948,319	$	711,151,538
Unit Cost/month		10.33		7.60		10.95		10.62		13.64
Total lines		894,106		877,299		916,765		2,566,713		4,343,728
Total lines served by DLC		705,646		504,795		580,186		1,850,370		3,128,544

	North-5	Central-2	South-2	Atlanta-2	GA-BST
Total network elements	$ 14.26	$ 11.68	$ 14.85	$ 14.36	$ 17.74
Loop cost	10.33	7.60	10.95	10.62	13.64
Aggregate switched elements	$ 3.93	$ 4.08	$ 3.90	$ 3.74	$ 4.10

Atlanta - Metro Area Competitors
Switching UNE Cost Element Comparison

	NORTH-5	CENTRAL-2	SOUTH-2	ATLANTA-2	BST-GA	
End office switching						
Line Port	$ 0.87	$ 0.91	$ 0.85	$ 0.85	$ 0.85	per line/month
Non-Line Port	$ 0.00109	$ 0.00107	$ 0.00108	$ 0.00108	$ 0.00110	per actual minute
Signaling network elements						
Links	$ 0.57	$ 0.22	$ 1.08	$ 0.82	$ 9.88	per link per month
STP	$ 0.00004	$ 0.00004	$ 0.00004	$ 0.00002	$ 0.00008	per signaling message
SCP	$ 0.00080	$ 0.00088	$ 0.00078	$ 0.00068	$ 0.00069	per query
Transport network elements						
Dedicated						
Sw+Sp Transport	$ 0.62	$ 0.30	$ 0.79	$ 0.62	$ 2.04	per DS-0 equivalent per month
Switched	$ 0.00006	$ 0.00003	$ 0.00008	$ 0.00006	$ 0.00020	per minute
Special	$ 2.19	$ 2.25	$ 2.70	$ 2.61	$ 2.55	per DS-0 equivalent per month
Transmission Terminal	$ 0.00022	$ 0.00022	$ 0.00027	$ 0.00026	$ 0.00025	per minute
	$ 0.00028	$ 0.00025	$ 0.00035	$ 0.00032	$ 0.00046	total per minute
Common						
Transport	$ 0.00007	$ 0.00003	$ 0.00010	$ 0.00008	$ 0.00038	per minute per leg (orig or term)
Transmission Terminal	$ 0.00021	$ 0.00022	$ 0.00028	$ 0.00027	$ 0.00029	per minute
	$ 0.00028	$ 0.00025	$ 0.00037	$ 0.00034	$ 0.00068	total per minute
Direct						
Transport	$ 0.00007	$ 0.00003	$ 0.00010	$ 0.00008	$ 0.00032	per minute
Transmission Terminal	$ 0.00023	$ 0.00023	$ 0.00029	$ 0.00028	$ 0.00029	per minute
	$ 0.00030	$ 0.00026	$ 0.00039	$ 0.00036	$ 0.00062	total per minute
Total cost of switched network elements (w/o Public)	$ 14.26	$ 11.68	$ 14.85	$ 14.36	$ 17.74	

Atlanta - Metro Area Competitors

Loop Summary - Grouped by Density Zones

Density zone	NORTH-5	CENTRAL-2	SOUTH-2	ATLANTA-2	BST-GA
Low three (excl 0-5)	$ 21.38	$ 23.70	$ 25.76	$ 24.01	$ 30.38
Middle three	11.55	10.44	11.86	11.81	11.64
High three	7.55	6.88	6.13	7.10	6.90

Scenario Inputs

Atlanta Metro with Changes in DEMs, Messages, Tandems and STPs

NOTE: This sheet diplays all user adjustable inputs which vary from HM 5.0a default settings

Workfile Name: e:\hm50\WORKFILES\HMWKGA2251922.XLS
Distribution Module Name: e:\hm50\MODULES\R50a_distribution.xls
Feeder Module Name: e:\hm50\MODULES\R50a_feeder.xls
Switching Module Name: e:\hm50\MODULES\R50a_switching_io.xls
Expense Module Name: e:\hm50\MODULES\R50a_expense_density.xls

Module/Table	Scenario Input	Scenario Value	Default Value
Switching	Local Call Attempts	9862476	16690573
Switching	IntraLATA Calls Completed	167419	283328
Switching	InterLATA intrastate Calls Completed	175418	296866
Switching	InterLATA interstate Calls Completed	819703	1387208
Switching	Local DEMs, thousands	46642502	78934550
Switching	Intrastate DEMs, thousands	3100723	5247449
Switching	Interstate DEMs, thousands	7824120	13241000

CENTRAL-2

Loop elements	0-5 lines/sq mi	5-100 lines/sq mi	100-200 lines/sq mi	200-650 lines/sq mi	650-850 lines/sq mi	850-2550 lines/sq mi	2550-5000 lines/sq mi	5000-10000 lines/sq mi	>10000 lines/sq mi	Totals
NID										
Annual Cost	$ -	$ -	$ 973	$ 82,652	$ 34,055	$ 834,993	$ 1,475,568	$ 947,668	$ 659,826	$ 4,035,735
Unit Cost/month	-	-	0.34	0.46	0.53	0.45	0.42	0.38	0.27	0.38
GA-BST				0.46	0.46	0.45	0.41	0.36	0.27	
Loop Distribution (DLC)										
Annual Cost	$ -	$ -	$ 24,578	$ 1,258,399	$ 474,011	$ 7,491,571	$ 9,154,029	$ 5,397,145	$ 1,131,922	$ 24,931,655
Unit Cost/month	-	-	8.67	7.72	7.36	5.25	4.05	3.34	2.17	4.12
GA-BST					7.30		4.03	3.16	2.15	
Loop Distribution (non-DLC)										
Annual Cost	$ -	$ -	$ -	$ 54,663	$ -	$ 1,671,149	$ 4,546,707	$ 2,649,845	$ 2,615,998	$ 11,538,362
Unit Cost/month	-	-	-	3.41	-	3.88	3.61	3.09	1.37	2.58
GA-BST								3.03		
Loop Distribution (all)										
Annual Cost	$ -	$ -	$ 24,578	$ 1,313,062	$ 474,011	$ 9,162,719	$ 13,700,737	$ 8,046,990	$ 3,747,920	$ 36,470,017
Unit Cost/month	-	-	8.67	7.33	7.36	4.93	3.89	3.25	1.54	3.46
GA-BST					7.11			3.10		
Loop Concentration (DLC)										
Annual Cost	$ -	$ -	$ 20,252	$ 709,453	$ 279,836	$ 6,071,308	$ 9,117,048	$ 6,441,033	$ 1,985,709	$ 24,624,638
Unit Cost/month	-	-	7.14	4.35	4.35	4.26	4.03	3.98	3.80	4.07
GA-BST			4.09	4.02	3.99	3.90	3.78	3.73	3.57	
Loop Concentration (non-DLC)										
Annual Cost	$ -	$ -	$ -	$ 1,537	$ -	$ 42,894	$ 125,903	$ 81,339	$ 155,747	$ 407,420
Unit Cost/month	-	-	-	0.10	-	0.10	0.10	0.10	0.08	0.09
GA-BST							0.10	0.09	0.08	
Loop Concentration (all)										
Annual Cost	$ -	$ -	$ 20,252	$ 710,990	$ 279,836	$ 6,114,202	$ 9,242,950	$ 6,522,372	$ 2,141,456	$ 25,032,058
Unit Cost/month	-	-	7.14	3.97	4.35	3.29	2.63	2.64	0.88	2.38
GA-BST			3.75	3.53	3.30	2.84	2.24	2.15	0.80	
Loop Feeder (DLC)										
Annual Cost	$ -	$ -	$ 21,362	$ 254,730	$ 90,562	$ 1,777,997	$ 2,489,673	$ 1,761,587	$ 536,791	$ 6,932,702
Unit Cost/month	-	-	7.54	1.56	1.41	1.25	1.10	1.09	1.03	1.14
GA-BST			2.11	1.24	1.20	1.00	0.96	0.96	0.94	
Loop Feeder (non-DLC)										
Annual Cost	$ -	$ -	$ -	$ 21,189	$ -	$ 767,468	$ 2,081,366	$ 1,469,510	$ 3,166,103	$ 7,505,635
Unit Cost/month	-	-	-	1.32	-	1.78	1.65	1.72	1.66	1.68
GA-BST						1.71	1.52	1.51	1.51	1.66
Loop Feeder (all)										
Annual Cost	$ -	$ -	$ 21,362	$ 275,919	$ 90,562	$ 2,545,465	$ 4,571,039	$ 3,231,097	$ 3,702,894	$ 14,438,338
Unit Cost/month	-	-	7.54	1.54	1.41	1.37	1.30	1.31	1.52	1.37
GA-BST			2.13	1.33	1.36	1.20	1.19	1.20	1.39	
Total Loop (DLC)										
Annual Cost	$ -	$ -	$ 67,166	$ 2,297,834	$ 878,464	$ 15,982,222	$ 21,708,341	$ 14,219,476	$ 3,796,277	$ 58,949,780
Unit Cost/month	-	-	23.70	14.09	13.64	11.21	9.60	8.79	7.27	9.73
GA-BST			20.78		12.95	11.18	9.18	8.22	6.94	
Total Loop (non-DLC)										
Annual Cost	$ -	$ -	$ -	$ 84,789	$ -	$ 2,675,157	$ 7,281,953	$ 4,528,650	$ 6,455,819	$ 21,026,368
Unit Cost/month	-	-	-	5.29	-	6.21	5.78	5.29	3.38	4.70
GA-BST								4.99		
Total Loop (all)										
Annual Cost	$ -	$ -	$ 67,166	$ 2,382,623	$ 878,464	$ 18,657,379	$ 28,990,293	$ 18,748,127	$ 10,252,096	$ 79,976,148
Unit Cost/month	-	-	23.70	13.31	13.64	10.05	8.24	7.58	4.22	7.60
GA-BST			19.96		12.23		7.86	6.82	4.16	
Total lines	-	-	236	14,923	5,366	154,746	293,360	206,170	202,499	877,299
Total lines served by DLC	-	-	236	13,586	5,366	118,858	188,392	134,821	43,535	504,795

SOUTH-2

Loop elements	0-5 lines/sq mi	5-100 lines/sq mi	100-200 lines/sq mi	200-650 lines/sq mi	650-850 lines/sq mi	850-2550 lines/sq mi	2550-5000 lines/sq mi	5000-10000 lines/sq mi	>10000 lines/sq mi	Totals
NID										
Annual Cost	$ -	$ 183,584	$ 217,436	$ 920,376	$ 245,215	$ 1,861,094	$ 666,569	$ 272,132	$ 345,777	$ 4,712,182
Unit Cost/month	-	0.50	0.49	0.48	0.46	0.46	0.43	0.39	0.24	0.43
GA-BST			0.47	0.46	0.46	0.45	0.41	0.36		
Loop Distribution (DLC)										
Annual Cost	$ -	$ 7,176,510	$ 6,823,444	$ 17,765,404	$ 2,864,542	$ 15,834,218	$ 3,738,665	$ 1,329,717	$ 230,987	$ 55,763,487
Unit Cost/month	-	19.47	16.37	10.45	7.30	5.80	4.11	3.74	2.55	8.01
GA-BST			14.11	9.83			4.03	3.16	2.15	
Loop Distribution (non-DLC)										
Annual Cost	$ -	$ -	$ 269,970	$ 1,663,519	$ 825,140	$ 6,997,045	$ 2,836,296	$ 935,007	$ 1,616,300	$ 15,143,277
Unit Cost/month	-	-	11.39	7.77	5.96	5.36	4.40	2.79	1.17	3.75
GA-BST			8.24	7.14		5.10	3.98			
Loop Distribution (all)										
Annual Cost	$ -	$ 7,176,510	$ 7,093,415	$ 19,428,923	$ 3,689,682	$ 22,831,264	$ 6,574,961	$ 2,264,723	$ 1,847,287	$ 70,906,764
Unit Cost/month	-	19.47	16.10	10.15	6.95	5.66	4.23	3.28	1.26	6.45
GA-BST			13.61	9.50		5.62	4.01	3.10		
Loop Concentration (DLC)										
Annual Cost	$ -	$ 1,772,163	$ 1,778,484	$ 7,045,540	$ 1,585,536	$ 10,930,871	$ 3,575,669	$ 1,372,177	$ 367,304	$ 28,427,744
Unit Cost/month	-	4.81	4.27	4.15	4.04	4.01	3.93	3.86	4.05	4.08
GA-BST			4.09	4.02	3.99	3.90	3.78	3.73	3.57	
Loop Concentration (non-DLC)										
Annual Cost	$ -	$ -	$ 2,846	$ 22,717	$ 13,694	$ 134,546	$ 64,550	$ 30,068	$ 107,486	$ 375,908
Unit Cost/month	-	-	0.12	0.11	0.10	0.10	0.10	0.09	0.08	0.09
GA-BST			0.10	0.10		0.10	0.10	0.09	0.08	
Loop Concentration (all)										
Annual Cost	$ -	$ 1,772,163	$ 1,781,330	$ 7,068,258	$ 1,599,230	$ 11,065,418	$ 3,640,219	$ 1,402,245	$ 474,789	$ 28,803,652
Unit Cost/month	-	4.81	4.04	3.69	3.01	2.74	2.34	2.03	0.32	2.62
GA-BST			3.75	3.53			2.24			
Loop Feeder (DLC)										
Annual Cost	$ -	$ 1,645,150	$ 897,190	$ 1,948,298	$ 397,401	$ 2,789,697	$ 939,892	$ 410,715	$ 94,903	$ 9,123,246
Unit Cost/month	-	4.46	2.15	1.15	1.01	1.02	1.03	1.16	1.05	1.31
GA-BST			2.11			1.00	0.96	0.96	0.94	
Loop Feeder (non-DLC)										
Annual Cost	$ -	$ -	$ 75,167	$ 403,364	$ 282,339	$ 2,314,343	$ 1,158,959	$ 622,637	$ 2,068,622	$ 6,925,431
Unit Cost/month	-	-	3.17	1.88	2.04	1.77	1.80	1.86	1.50	1.71
GA-BST			2.33			1.71	1.52	1.51		1.66
Loop Feeder (all)										
Annual Cost	$ -	$ 1,645,150	$ 972,357	$ 2,351,662	$ 679,740	$ 5,104,040	$ 2,098,851	$ 1,033,352	$ 2,163,525	$ 16,048,678
Unit Cost/month	-	4.46	2.21	1.23	1.28	1.27	1.35	1.50	1.47	1.46
GA-BST			2.13			1.20	1.19	1.20	1.39	
Total Loop (DLC)										
Annual Cost	$ -	$ 10,777,407	$ 9,704,855	$ 27,576,590	$ 5,028,765	$ 30,813,537	$ 8,644,566	$ 3,252,719	$ 714,557	$ 96,512,995
Unit Cost/month	-	29.24	23.28	16.23	12.81	11.30	9.49	9.15	7.88	13.86
GA-BST			20.78	15.56		11.18	9.18	8.22	6.94	
Total Loop (non-DLC)										
Annual Cost	$ -	$ -	$ 359,682	$ 2,192,629	$ 1,185,102	$ 10,048,278	$ 4,336,034	$ 1,719,733	$ 4,116,821	$ 23,958,281
Unit Cost/month	-	-	15.18	10.24	8.56	7.70	6.73	5.13	2.99	5.93
GA-BST			11.14	9.66		7.36	6.01	4.99		
Total Loop (all)										
Annual Cost	$ -	$ 10,777,407	$ 10,064,537	$ 29,769,219	$ 6,213,867	$ 40,861,815	$ 12,980,600	$ 4,972,452	$ 4,831,378	$ 120,471,275
Unit Cost/month	-	29.24	22.85	15.56	11.70	10.13	8.35	7.20	3.29	10.95
GA-BST			19.96	14.82		10.10	7.86	6.82		
Total lines	-	30,716	36,710	159,456	44,257	336,115	129,601	57,538	122,371	916,765
Total lines served by DLC	-	30,716	34,735	141,606	32,719	227,331	75,894	29,624	7,560	580,186

ATLANTA-2

Loop elements	0-5 lines/sq mi	5-100 lines/sq mi	100-200 lines/sq mi	200-650 lines/sq mi	650-850 lines/sq mi	850-2550 lines/sq mi	2550-5000 lines/sq mi	5000-10000 lines/sq mi	>10000 lines/sq mi	Totals
NID										
Annual Cost	$ -	$ 299,955	$ 550,906	$ 2,033,242	$ 712,370	$ 5,115,686	$ 2,652,080	$ 1,214,812	$ 720,321	$ 13,299,372
Unit Cost/month	-	0.49	0.50	0.48	0.48	0.46	0.42	0.37	0.27	0.43
GA-BST			0.47	0.46	0.46	0.45	0.41	0.36		
Loop Distribution (DLC)										
Annual Cost	$ -	$ 11,312,207	$ 16,671,977	$ 39,815,943	$ 8,760,970	$ 49,127,327	$ 16,040,696	$ 7,381,356	$ 1,364,933	$ 150,475,408
Unit Cost/month	-	18.62	15.37	10.16	7.33	5.82	3.95	3.24	2.21	6.78
GA-BST			14.11	9.83	7.30			3.16	2.15	
Loop Distribution (non-DLC)										
Annual Cost	$ -	$ -	$ 271,308	$ 2,173,096	$ 1,756,171	$ 13,609,527	$ 8,978,546	$ 3,010,376	$ 2,868,641	$ 32,667,664
Unit Cost/month	-	-	11.45	7.07	6.04	5.08	3.95	3.06	1.41	3.80
GA-BST			8.24					3.03		
Loop Distribution (all)										
Annual Cost	$ -	$ 11,312,207	$ 16,943,284	$ 41,989,039	$ 10,517,141	$ 62,736,853	$ 25,019,242	$ 10,391,731	$ 4,233,574	$ 183,143,073
Unit Cost/month	-	18.62	15.29	9.93	7.08	5.64	3.95	3.19	1.59	5.95
GA-BST			13.61	9.50		5.62		3.10		
Loop Concentration (DLC)										
Annual Cost	$ -	$ 2,853,255	$ 4,577,984	$ 16,121,779	$ 4,831,465	$ 33,760,301	$ 15,778,017	$ 8,706,030	$ 2,268,019	$ 88,896,849
Unit Cost/month	-	4.70	4.22	4.11	4.04	4.00	3.89	3.82	3.66	4.00
GA-BST			4.09	4.02	3.99	3.90	3.78	3.73	3.57	
Loop Concentration (non-DLC)										
Annual Cost	$ -	$ -	$ 2,861	$ 32,395	$ 31,728	$ 273,003	$ 225,450	$ 90,231	$ 161,715	$ 817,382
Unit Cost/month	-	-	0.12	0.11	0.11	0.10	0.10	0.09	0.08	0.10
GA-BST			0.10	0.10	0.10	0.10	0.10	0.09	0.08	0.09
Loop Concentration (all)										
Annual Cost	$ -	$ 2,853,255	$ 4,580,845	$ 16,154,174	$ 4,863,192	$ 34,033,304	$ 16,003,467	$ 8,796,260	$ 2,429,734	$ 89,714,232
Unit Cost/month	-	4.70	4.13	3.82	3.27	3.06	2.53	2.70	0.91	2.91
GA-BST			3.75	3.53		2.84	2.24	2.15	0.80	
Loop Feeder (DLC)										
Annual Cost	$ -	$ 2,496,869	$ 2,080,694	$ 4,685,611	$ 1,387,230	$ 8,708,994	$ 4,095,135	$ 2,254,385	$ 599,888	$ 26,308,805
Unit Cost/month	-	4.11	1.92	1.20	1.16	1.03	1.01	0.99	0.97	1.18
GA-BST						1.00	0.96	0.96	0.94	
Loop Feeder (non-DLC)										
Annual Cost	$ -	$ -	$ 75,555	$ 535,885	$ 617,414	$ 4,639,155	$ 3,752,824	$ 1,632,347	$ 3,229,658	$ 14,482,838
Unit Cost/month	-	-	3.19	1.74	2.12	1.73	1.65	1.66	1.58	1.68
GA-BST			2.33		2.11	1.71	1.52	1.51	1.51	1.66
Loop Feeder (all)										
Annual Cost	$ -	$ 2,496,869	$ 2,156,249	$ 5,221,496	$ 2,004,644	$ 13,348,148	$ 7,847,959	$ 3,886,732	$ 3,829,546	$ 40,791,643
Unit Cost/month	-	4.11	1.95	1.23	1.35	1.20	1.24	1.19	1.44	1.32
GA-BST						1.20	1.19		1.39	
Total Loop (DLC)										
Annual Cost	$ -	$ 16,962,287	$ 23,869,776	$ 62,508,805	$ 15,552,662	$ 95,480,179	$ 37,614,480	$ 19,190,193	$ 4,400,425	$ 275,578,806
Unit Cost/month	-	27.92	22.01	15.94	13.02	11.31	9.26	8.42	7.11	12.41
GA-BST			20.78	15.56	12.95	11.18	9.18	8.22	6.94	
Total Loop (non-DLC)										
Annual Cost	$ -	$ -	$ 361,507	$ 2,889,146	$ 2,544,685	$ 19,753,813	$ 13,908,269	$ 5,099,342	$ 6,812,750	$ 51,369,513
Unit Cost/month	-	-	15.25	9.40	8.76	7.38	6.12	5.18	3.34	5.98
GA-BST			11.14			7.36	6.01	4.99		
Total Loop (all)										
Annual Cost	$ -	$ 16,962,287	$ 24,231,283	$ 65,397,951	$ 18,097,348	$ 115,233,992	$ 51,522,749	$ 24,289,535	$ 11,213,175	$ 326,948,319
Unit Cost/month	-	27.92	21.87	15.47	12.18	10.37	8.14	7.45	4.22	10.62
GA-BST			19.96	14.82		10.10	7.86	6.82	4.16	
Total lines	-	50,635	92,340	352,337	123,781	926,356	527,748	271,829	221,688	2,566,713
Total lines served by DLC	-	50,635	90,365	326,730	99,563	703,240	338,415	189,845	51,576	1,850,370

There are various cost proxy models that have been in development over the last several years. We have provided data in this proceeding based upon the results of the HAI model. There exists, in addition, the benchmark cost proxy model and the FCC's own high cost proxy model. As commented on in this proceeding, these models provide a valuable tool to provide data in response to the various arguments made by the parties. The use of a model to provide consistency between the treatment afforded an ILEC in determining its forward-looking cost and those of a CLEC in supporting its costs under various scenarios of competition is fair and equitable. We have pointed out above that various positions taken by AT&T and MCI in state regulatory cost proceedings (in which, for example, structure costs are reduced to a minimum by assuming that the ILEC can share its facilities with many other utilities) are contrary to positions in this proceeding (*e.g.*, Dr. Bryant argues that it would be appropriate for a CLEC to be considered having high fixed costs because it does not have the ability to share structures with other utilities).

23. In paragraph 24, the Commission requests comments to discuss potential alternative sources of network elements from other competing carriers, as well as availability of network elements through self provisioning. The Commission asks commentors to provide information on the cost of alternatives, the length of time it takes to obtain alternatives, and the extent which alternatives to unbundled elements are being utilized now.

The data we have provided from our analysis speaks directly to the cost of the alternatives and has been discussed in detail above. It is interesting to note that the Commission, in its order setting forth the methodology to determine the cost of network elements, has assumed that the price of these network elements must be adjusted immediately to reflect the forward-looking total element long run incremental costs (TELRIC). In many cases, the timeframe to change such factors as the percent of plant that is aerial versus buried versus underground takes a long period of time to achieve. If it is to be argued in this proceeding that a CLEC should obtain a particular network element because it would not have the ability to self provide all of the elements at once, then a level playing field would argue that the pricing of various ILEC elements should also be phased in over some period of time to reflect that it would not be possible for the ILEC to reprovision all of its investments all at once. As stated before, to the extent that these elements are made available, based upon the inability of CLECs to self-provide the elements all at once, a sunset provision should be adopted.

24. In paragraph 27, the Commission seeks comments on the extent to which they should consider the quantity of facilities that may be necessary for competitors to obtain in order to compete effectively. Accordingly, the FCC asks parties to comment on the extent to which such factors as economies of scale, penetration assumptions and the requesting carriers particular market entry strategies should be considered.

The analysis that we have undertaken (and the analysis available to the Commission with the appropriate use of their high cost proxy model), provides relevant data on the factor of economies of scale. The data presented shows that over a large relevant range of operation, economies of scale might actually be in favor of a CLEC. With regard to the issue of the quantity of facilities and the lead time in which the facilities would be installed, we believe that this is an issue that should be evaluated based upon the ability of the CLEC to self-provide such facilities. As stated before, to the extent that the lead time is the factor that results in a network element being made available to a CLEC, a sunset provision should concurrently be set in a reasonable time frame.